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REMARKS

Claims 1-5 and 66-69 are pending with claims 1, 66, and 67 being independent. Claims 66 and 67 have been amended. No new matter has been added. For at least the following reasons, Applicants respectfully request reconsideration and allowance of this application.

Rejection of Claims 1-4 Under 35 U.S.C. § 103(a)

Claims 1-4 have been rejected under 35 U.S.C. § 103(a) as being obvious over Lee (U.S. Pat. No. 6,272,961) in view of Jameson (U.S. Pat. No. 3,777,792), Weissman (U.S. Pat. No. 4,885,965), Mayfield (U.S. Pat. No. 5,063,806), Rueb (U.S. Pat. No. 5,577,428), Welch (U.S. Pat. No. 5,906,538), Greenland (U.S. Pat. No. 6,080,041), and Gorgol (U.S. Pat. No. 6,273,081). For at least the following reasons Applicants respectfully request withdrawal of this rejection. First, the Office Action has failed to establish a prima facie case of obviousness. In particular, the prior art does not teach or suggest all of the claim limitations, there no suggestion or motivation to arrive at the claimed invention, and the secondary references relate to non-analogous art. Second, even if the Office Action has established a prima facie case of obviousness, objective evidence of nonobviousness related to the criticality of the switch location counsel against a finding that the claimed invention is obvious. These reasons will be discussed in turn.

I. No Prima Facie Case of Obviousness

The Office Action has failed to establish a prima facie case of obviousness against claim 1. To establish a prima facie case of obviousness, three basic criteria must be met: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; and (3) the prior art references must teach or suggest all the claim limitations. M.P.E.P. § 2142. At least the first and third of these criteria have not been satisfied. In addition, the prior art references do not relate to analogous art. These reasons will be discussed in turn.

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A. Prior Art References Do Not Teach or Suggest All Claim Limitations

A prima facie case of obviousness has not been established because the cited prior art fails to teach or suggest all of the claim limitations of independent claim 1. "To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." M.P.E.P. § 2143.03 (citing In re Royka, 490 F.2d 981 (CCPA 1974)).

Independent claim 1 relates to a beveling head saw with "a switch electrically connected to the motor assembly and disposed on the support assembly so that, when the motor assembly is pivoted about the pivot axis, the switch remains stationary" (emphasis added). Lee, the base reference, describes a beveling head saw, but, as acknowledged on page 2 of the Office Action, fails to describe the stationary switch of claim 1. For this feature, the Office Action instead relies upon the teachings of Jameson, Weissman, Mayfield, Rueb, Welch, Greenland, and Gorgol, which according to the Office Action "disclose saws with switches in various locations." However, as discussed in greater detail below in section I.B, none of these seven secondary references describes a power switch disposed on the motor assembly so that the switch remains stationary while the head bevels. This deficiency of the prior art has not been disputed by the Examiner at any point during the lengthy prosecution of this application. Indeed, the Office Action acknowledges that "the specific location of the switch that Applicant is claiming is not specifically taught" by any of these references.

Instead, the Office Action instead asserts that these references are "cumulative evidence that a switch can be placed almost anywhere on a saw." The Office Action relies upon In re Japitkse, 86 USPQ 70 (CCPA 1950), to argue that "the location of the switch would have been an obvious matter of choice dependent on the suitability of that location for whatever desired reason, such as dexterity, eye coordination, or standing position of the operator, ease of manufacturing, or position of the work piece and/or product." However, in In re Japitkse, the claims related to the position of a switch on a hydraulic press were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device. In contrast, moving the switch from a movable location, as shown in the cited prior art, to a

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stationary location substantially alters the operation of the saw by enabling easy location of the switch by the user while beveling the head of the saw.

In addition, “[t]he mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device.” M.P.E.P. § 2144.04(IV)(C) (quoting Ex parte Chicago Rawhide Mfg. Co., 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984)). As explained further in the next section, the prior art cited in the Office Action does not provide any such motivation or suggestion for making the proposed modification to Lee. Therefore, the legal precedent of In re Japitske is not applicable to this application.

For at least the foregoing reasons, the Office Action fails to satisfy the requirement for a prima facie case of obviousness that all the claim limitations be taught or suggested by the prior art.

B. No Motivation or Suggestion to Combine Teachings of References

In addition or in the alternative to the reasons set forth above in section I.A, a prima facie case of obviousness has not been established because there is no motivation or suggestion to modify Lee in the way suggested in the Office Action. “Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art.” M.P.E.P. 2143.01. “The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” Id. (citing In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)). In this case, there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to arrive at the claimed invention. Moreover, if the “proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to

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make the proposed modification." Id. (citing In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)). In this case, several of the references relied upon by the Office Action teach away from the proposed combination, rendering the combination unsatisfactory for its intended purpose.

Jameson relates to a mortise cutting machine that automatically feeds and cuts bedframes. The machine includes a feed table 11, a rotary work fence 12, and a saw assembly 13. The saw assembly includes a saw 30 driven by a motor 37. Jameson is silent as to a switch that is electrically connected to the motor assembly, as recited in claim 1. By failing to show any switch whatsoever, Jameson provides no motivation or suggestion to change the location of the switch in Lee.

Weissman relates to a rotary table saw used for cutting sections of dental models. The saw includes a base 12 that houses a motor 41, a saw blade 50 and that includes a switch 24. Coupled to the base 12 is a work table that moves up and down relative to the base to hide and expose the saw blade. The motor 41 and the saw blade 50 do not move or bevel. Because Weissman shows a switch coupled to a motor and saw assembly that does not move or bevel, one of ordinary skill in the art would not be motivated to look to Weissman for a teaching of a stationary switch for a beveling head saw. Accordingly, Weissman provides no motivation or suggestion to change the position of the switch in Lee.

Mayfield relates to a radial arm saw with a work table 12, a support arm assembly 18, and a carriage 24 that supports a saw blade 30, and an anti-kick device 36. The carriage 24 is pivotable about cylindrical portion 20 and also enables the saw blade to be moved longitudinally. The radial arm saw includes three switches 54, 84, and 80 that may arguably correspond to the claimed switch. However, each of these moves with the carriage 24, rather than remaining stationary, as required by the claim. Switch 54 turns on and off the kick preventing means and is located directly on the handle of the carriage. Rheostat 84 adjusts the speed of the motor driving kick preventing means and is coupled with the carriage 24 to pivot with the carriage about cylindrical portion 20. Switch 80 turns on and off a clutch and is positioned on the carriage and pivots with the carriage. Because each of the switches of Mayfield are not stationary, Mayfield

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provides no motivation or suggestion to make the switch of Lee stationary. To the contrary, Mayfield teaches away from the proposed modification to Lee.

Rueb relates to an apparatus 10 for holding a portable circular saw 85 and for holding and guiding a workpiece across the saw 85. Because Rueb describes the switch as being on a portable saw 85, the switch inherently moves with the saw. Thus, Rueb provides no motivation or suggestion for moving the switch of the saw of Lee. To the contrary, Rueb teaches away from the proposed modification of Lee.

Welch relates to a cutting apparatus 10 for cutting a work piece 24. The cutting apparatus 10 includes a motor unit 11 mounted to a mounting plate 34, which is attached to a planar member 17 by hinges 40. A bolt 41 extends through a lift 42 which extends underneath the mounting plate 34. As the bolt 41 is rotated clockwise, the lift 42 rises upwardly, along the bolt 41, and elevates the mounting plate 34, and selectively elevating an abrasive wheel 12 to a desired height. The abrasive wheel 12 extends in a substantially vertical plane perpendicular to a longitudinal axis of the arbor 13 and motor unit 11. A plurality of guide rails 14, 15 and 16 are mounted on the top surface 18 of the planar member 17, parallel the abrasive wheel 12. A switch (not labeled) is mounted to the planar member 17 and electrically connected to the motor unit 11.

The motor unit 11 of Welch (which arguably corresponds to the claimed motor assembly) does not pivot "about an axis substantially parallel to the longitudinal axis" of the guide rail 14 (which arguably corresponds to the claimed first rail) in order to allow the saw assembly to perform bevel cuts. Rather, the motor unit 11 of Welch pivots on hinges 40 to enable adjustment of the height of the abrasive wheel 12. Thus, Welch does not provide motivation or suggestion to move the switch of Lee to so that the switch is "disposed on the support assembly so that, when the motor assembly is pivoted about the pivot axis, the switch remains stationary," as recited in claim 1, as moving the switch as taught by Welch would not achieve the claimed invention.

Greenland relates to a saw 10 with a rectangular frame 12, a sliding table 14, and a pivoting support arm 16 that holds a motor assembly 18 above the table. The motor assembly 18 includes a cutting blade 20 mounted to an electric motor 22 within a housing 24. The motor

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assembly includes a lever 28 mounted to a power switch 30 to automatically turn on the motor as a tile is moved toward the motor assembly 18. Thus, the switch 30 pivots with the motor housing 24. Thus, Greenland fails to describe or suggest modifying the switch of Lee to be stationary. To the contrary Greenland teaches away from the proposed modification of Lee by teaching a switch 30 that moves with the motor housing 24.

Gorgol relates to a gasoline powered masonry saw 10 that includes a gasoline engine 18, an arbor 20, a cutting blade 22, a dust collection pan 24, and a cutting tray 26, supported on a frame 12 with vibration dampening material. Gorgol is silent as to a switch that is electrically connected to the motor assembly, as recited in claim 1. By failing to show any switch whatsoever, Gorgol provides no motivation or suggestion to change the location of the switch in Lee.

Thus, none of the secondary references cited in the Office Action, taken in any combination, provide a motivation or suggestion to modify the location of the switch of Lee to be "disposed on the support assembly so that, when the motor assembly is pivoted about the pivot axis, the switch remains stationary," as recited in claim 1, and, indeed, several teach away from the proposed modification.

The Office Action argues that "the location of the switch would have been an obvious matter of choice dependent on the suitability of that location for whatever desired reason, such as dexterity, eye coordination, or standing position of the operator, ease of manufacturing, or position of the work piece and/or product." Although the suggestion or motivation to modify a reference need not be explicit, the motivation or suggestion must be drawn from "the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kahn, 441 F.3d 977, 985 (Fed. Cir. March 22, 2006).

The purported suggestion or motivation set forth in the Office Action is not drawn from the teachings of the prior art, the knowledge of one of ordinary skill in the art, or the nature of the problem to be solved. First, as explained above, this motivation or suggestion is not apparent in the prior art. Second, the Office Action provides no evidence of the knowledge of one of

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ordinary skill in the art that would motivate the proposed modification of Lee. Third, the Office Action fails to set forth the nature of the problem to be solved in a way that would motivate the proposed modification of Lee.

Rather, as described in greater detail below with respect to the objective evidence of nonobviousness, having the switch remain stationary, as recited in claim 1, provides significant advantages over the moveable switch shown in Lee. For example, the stationary switch allows the user of the saw to know the location of the switch at all times during operation of the device, reducing fatigue, frustration, etc. in locating a moving switch. Nothing in the prior art, the knowledge of one of ordinary skill, or the nature of the problem to be solved suggests modifying Lee to achieve this result. Instead, the proposed motivation or suggestion appears to be based on impermissible hindsight.

In response, the Office Action states that although "the examiner suggested a different reason for modifying switch placement than Applicant, the fact that Applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious." (Office Action at page 6 (citing Ex parte Obiaya, 227 USPQ 58, 60 (BPAI 1985))). In this application, Applicant has not recognized an advantage that would flow from following the teachings of the prior art. Rather, Applicant has designed a switch having a different location than what is shown in the prior art for the purpose of achieving a different result than what is taught by the prior art.

For at least the foregoing reasons, the Office Action fails to provide a motivation or suggestion for the modification of Lee sufficient for a prima facie case of obviousness.

C. Secondary References Relate to Non-Analogous Art

In addition to or in the alternative of the reasons discussed above in Sections I.A and I.B, the Office Action fails to establish a prima facie case of obviousness because the secondary references relate to non-analogous art. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." M.P.E.P. § 2141.01(a) (quoting In re Oetiker, 977 F.2d 1443, 1446, 24 USPQ2d

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1443, 1445 (Fed. Cir. 1992)). The secondary references relied upon by the Examiner do not relate to beveling head saws, and are therefore outside of Applicants' field of endeavor.

Jameson relates to a mortise cutting machine that automatically feeds and cuts bedframes. Weissman relates to a non-beveling saw used for cutting sections of dental models. Mayfield relates to a radial arm saw that is pivotable about cylindrical portion 20, but does not bevel. Rueb relates to an apparatus 10 for holding a portable circular saw 85, which does not bevel or move. Welch relates to a cutting apparatus 10 that pivots on hinges 40 to enable adjustment of the height, but not beveling, of the abrasive wheel 12. Greenland relates to a saw 10 with a rectangular frame 12, a sliding table 14, and a pivoting, but non-beveling, support arm 16 that holds a motor assembly 18 above the table. Gorgol relates to a gasoline powered masonry saw 10 that includes a non-beveling cutting blade 22. Because these references relate to non-analogous art they cannot form the basis of an obviousness rejection against claim 1.

II. Objective Evidence of Nonobviousness

Even if the Office Action establishes a prima facie case of obviousness, objective evidence related to the criticality of the switch location – as demonstrated by the Affidavit of Stuart Wright Under 37 C.F.R. § 1.132 that was submitted with Applicants November 15, 2006 Reply (“Affidavit”) – rebuts this prima facie case of obviousness. “Affidavits or declarations, when timely presented, containing evidence of criticality or unexpected results, commercial success, long-felt but unsolved needs, failure of others, skepticism of experts, etc., must be considered by the examiner in determining the issue of obviousness of claims for patentability under 35 U.S.C. 103.” M.P.E.P. § 716.01(a).¹ “If rebuttal evidence of adequate weight is produced, the holding of prima facie obviousness, being but a legal inference from previously uncontradicted evidence, is dissipated.” *In re Piasecki*, 745 F.2d 1468 (Fed. Cir. 1984). The Affidavit provides sufficient objective evidence of the criticality of the switch location to rebut the prima facie case of obviousness.

The location of the claimed power switch is critical to the ergonomics and ease of use of the claimed saw. The power switch of the claimed saw is positioned on the support assembly so

¹ In Applicant's previous response, this citation was inadvertently typed as M.P.E.P. § 706.01(a).

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that when the motor assembly is pivoted about its pivot axis, the switch remains stationary (Affidavit at ¶ 6). The position of the power switch was carefully chosen after months of significant research into the positioning of the power switch, as follows (Id.). The design team for the claimed saw reviewed the positioning of switches on prior beveling head saws, of which there are two types (Id. at ¶ 7). In the overhead beveling head tile saws (an example of which is depicted in Exhibit A attached to the Affidavit), the power switch is located on the motor assembly, so that the switch pivots with the motor assembly (Id.). In the angle grinder-based tile saws (an example of which is depicted in Exhibit B attached to the Affidavit), the power switch is on a moving portion of the grinder, so that the power switch moves with the grinder body (Id.). The design team discovered that operation of the switches on these prior tile saws is difficult and cumbersome for the user (Id.). The moving switch on these tile saws often is difficult to locate as the tile saw is being operated, and the user often experiences fatigue and frustration in locating the switch on the tile saw (Id.).

The design team then considered and researched positioning the power switch on a variety of alternative positions on a new saw. (Id. at ¶ 8). As a result of extensive research, the design team determined that positioning the power switch on the support assembly so that the switch remains stationary relative to the pivoting motor assembly is optimal (Id.). Such positioning of the power switch is critical to the ergonomics and ease of use of the tile saw (Id.). For example, this positioning of the power switch enhances the ability of the user to locate the switch during operation of the tile saw (Id.). This enables the user to both turn on and shut off the tile saw quickly and easily without having to adjust the position of other portions of the tile saw (Id.). In addition, this positioning of the tile saw switch reduces user fatigue and frustration when using the tile saw (Id.).

Placing the power switch on the support assembly so that it remained stationary required the design team to overcome several technical and financial challenges (Id. at ¶ 9). The switch had to be wired in such a manner that the switch would remain stationary in a position further removed from the motor than in previous tile saws (Id.). This involved additional cost

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considerations, which needed to be reduced in order to price the tile saw in such a way to be attractive to the end user (Id.).

The stationary switch of this application has been included as a feature on the DeWalt D24000 10" Wet Tile Saw (photographs of which are attached as Exhibit C to the Affidavit) (Id. at ¶ 10). As shown in Exhibit C, the tile saw switch remains stationary, even when the head bevels (Id.). The design team has found that this feature provides significant advantages in the ergonomics and ease of use of the tile saw, including allowing the user to locate the switch during operation of the tile saw, enabling the user to both turn on and shut off the tile saw quickly and easily without having to adjust the position of other portions of the tile saw, and reducing user fatigue and frustration when using the tile saw (Id.).

The Office Action attempts to discount the objective evidence presented in the Affidavit by making three arguments. First, the Office Action asserts that "only two types of affidavits can [rebut the prima facie case]: (1) affidavits demonstrating unexpected results or properties, or (2) affidavits establishing secondary considerations of non-obviousness, such as long-felt need or commercial success," and that "a showing of criticality is not a valid way to rebut the prima facie case" (Office Action at page 5). The Office Action provides no legal support for this incorrect statement of law. To the contrary, affidavits "containing evidence of criticality or unexpected results, commercial success, long-felt but unsolved needs, failure of others, skepticism of experts, etc., must be considered by the examiner in determining the issue of obviousness of claims for patentability under 35 U.S.C. 103." M.P.E.P. § 716.01(a). Thus, several factors other than unexpected results, long felt need, and commercial success, including criticality, are valid objective considerations of non-obviousness.

Second, the Office Action argues that the Affidavit is improper because "Affidavits showing criticality generally relate to ranges" (Office Action at page 5, citing M.P.E.P. § 716.02(d)). However, while criticality may be used to show optimization of a range, a showing of criticality is not limited to the case of ranges. Moreover, even if criticality is limited to ranges, the Affidavit demonstrates criticality of the claimed switch location within a range of alternative switch locations on a saw. By showing the criticality of the claimed stationary

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switch, the Affidavit presents sufficient objective evidence to overcome the purported prima facie case of obviousness.

Finally, the Office Action contends that “[w]hile Applicant argues the position of the switch is critical, the criticality of the switch is not presented in the original disclosure” (Office Action at page 6). Again, the Office provides no legal support for a requirement that objective evidence of non-obviousness appear in the original specification. Moreover, even if correct, the criticality of the switch location is shown in the original disclosure at least at Figs. 1 and 13A and paragraph 133, which states that “[i]t is preferable that switch 92 be placed on arm body 61, so that it remains stationary, even when motor assembly 78 is beveled.” By calling attention to the stationary switch location, the disclosure demonstrates the criticality of that location.

Thus, for at least the foregoing reasons, the Affidavit sets forth objective evidence as to the criticality of the switch position sufficient to rebut the purported prima facie case of obviousness set forth in the Office Action.

III. Conclusion

For at least the foregoing reasons, the Office Action has not established a prima facie case of obviousness as to claim 1. Moreover, even if the Office Action has established a prima facie case of obviousness, there is objective evidence to rebut the prima facie case. Therefore, claim 1, and its dependent claims 2-4, are patentable over Lee, Jameson, Weissman, Mayfield, Rueb, Welch, Greenland, and Gorgol, or any combination thereof.

Rejection of Claim 5 Under 35 U.S.C. § 103(a)

Claim 5 has been rejected under 35 U.S.C. § 103(a) as being obvious over Lee, as applied to claim 1 above, and further in view of Klingens (U.S. Pat. No. 2,691,398). Claim 5 depends from claim 1 and is allowable for at least the reasons discussed above with respect to claim 1. Moreover, Klingens does not remedy the deficiencies of Lee discussed above with respect to claim 1. In particular, Klingens does not describe or suggest, nor is it relied upon to show, at least the claimed “switch electrically connected to the motor assembly and disposed on the

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support assembly so that, when the motor assembly is pivoted about the pivot axis, the switch remains stationary." For at least these reasons, claim 5 is patentable over Lee and Klingens.

Allowable Subject Matter

Applicants appreciate the indication of allowable subject matter in claims 66-69. Claims 66 and 67 have been amended to be rewritten in independent form including all of the limitations of the base claim and any intervening claims.

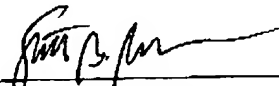
Conclusion

Applicants do not acquiesce to the characterizations of the art. For brevity and to advance prosecution, however, Applicants have not addressed all characterizations of the art, but reserve the right to do so in further prosecution of this or a subsequent application.

No fees are believed to be due. Please apply any charges or credits to deposit account 02-2548.

Respectfully submitted,

Date: 3/12/2007



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